

# HELP

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## 1. Standards and Conventions for Buttons and On-screen Choices

In this document, all buttons that appear on screen both in the HPC Presentation and in the Windows operating system will appear in **bold**. All text messages that appear on screen, but cannot be pressed will appear in "quotes."

## 2. Personal Computer System Requirements

The basic requirements are as follows:

Windows 95, 98, NT, 2000, ME

Pentium II 333 or higher

64 MB RAM

VGA monitor running 800 X 600 resolution at 16 bit color (24 or 32 bit color highly recommended)

8X CD-ROM (16X or faster highly recommended)

450MB hard disk space (if installed to hard drive)

Microsoft Excel97™ or newer

Microsoft Word97™ or newer

## 3. Installation Options

### 3a. Option 1: Run HPC CD-ROM from the CD-ROM

If you have limited space on your hard drive, you may run the HPC presentation from the CD-ROM without installing any files to your computer.

Place the HPC CD-ROM in the CD-ROM drive. The HPC splash screen will appear on your screen within a few seconds. If the splash screen does not display, Auto Insert Notification may be disabled on your computer. See the Frequently Asked Questions in the Help Section for directions to enable Auto Insert Notification.

Select **Run Presentation from CD** by single-clicking on that option. The hourglass will appear briefly and the High Performance Concrete Bridge main menu will display. The fully functional, complete concrete bridge data in the HPC CD-ROM is now accessible.

### 3b. Option 2: Install the HPC CD-ROM to your hard drive

If you have space available on your hard drive, installing the HPC presentation to your hard drive will improve performance.

Place the HPC CD in the CD-ROM drive. The HPC splash screen (titled “HPCintro”) will appear on your screen within a few seconds. If the splash screen does not display, Auto Insert Notification may be disabled on your computer. See the Frequently Asked Questions in the Help Section for directions to enable Auto Insert Notification.

Select **Install to hard drive** by clicking that option. The HPC Setup program will initialize. Select **Next** on each screen to continue through the standard installation. Click **Finish** when the screen reads, "HPC v3.0 has been successfully installed."

To launch the presentation, click **Start** from the Windows menu bar, then choose the **Programs** submenu item. Scroll to the bottom of the Programs listing until you find “HPC Presentation v3.0”. To run the presentation click **Run HPC presentation v3.0**. You may also run the presentation by double clicking the **HPC v3.0** icon on your desktop. After installing the presentation to the hard drive, it is no longer necessary to insert the CD-ROM into the drive to run the presentation.

### 3c. Uninstall HPC CD-ROM from your hard drive

Once installed on your system's hard drive, the HPC presentation can be simply and completely uninstalled if desired. Click **Start** from the Windows menu bar, and then choose the **Programs** submenu item. Scroll to the bottom of the Programs listing until you find "HPC Presentation v3.0" To completely remove the HPC presentation and data from your hard drive, select **Uninstall HPC presentation v3.0** by clicking on the trash bin icon. The uninstall Wizard will display, "Welcome to the HPC uninstall program." To proceed through the standard uninstall, select **Next** and then **Finish** to complete the uninstall operation.

## 4. About the HPC CD-ROM

In 1993, the Federal Highway Administration (FHWA) initiated a national program to implement the use of high performance concrete (HPC) in bridges. The program included the construction of demonstration bridges in each of the FHWA regions and dissemination of the technology and results at showcase workshops. The bridges are located in different climatic regions of the United States and use different types of superstructures. The bridges demonstrate practical application of high performance concretes. In addition, construction of these bridges provided opportunities to learn more about the placement and actual behavior of HPC in bridges. Concrete material properties were measured for most of the bridges. This CD was designed to present a compilation of the data on 19 HPC bridges in 14 states.

## 5. Presentation of Bridge Data

The information is presented in two formats:

- An individual compilation for each bridge
- Ten summary tables

### 5a. Individual Bridge Compilations

Each compilation is divided into the following sections:

1. **DESCRIPTION.** This section contains a summary of the overall bridge features.
2. **BENEFITS OF HPC AND COSTS.** Highlights why HPC was used in the bridge and provides total cost, cost per sq ft, cost per ft, or any other information that was obtained.
3. **STRUCTURAL DESIGN.** Essential features about the structural design of the bridge.
4. **SPECIFIED ITEMS.** This section includes only items that were required by the HPC special provisions. If items were not identified as being specified, the line is left blank.
5. **CONCRETE MATERIALS.** This section lists information obtained before actual construction of the bridges. It represents the information that would normally be submitted for approval of concrete mix proportions plus additional data that were available because of the research component.
6. **CONCRETE MATERIAL PROPERTIES.** This section contains information obtained during the actual construction. It is separated into sections on material properties from quality control (QC) tests and material properties from research tests. Separate sections are provided for each HPC element used in the bridge such as girders and deck.
7. **OTHER RESEARCH DATA.** This section contains research data specifically related to the construction of the showcase bridge. The information varies considerably between compilations depending on the approach and interests of the researchers.
8. **OTHER RELATED RESEARCH.** This section contains other research information that was usually obtained prior to construction of the bridge.
9. **SOURCES OF DATA.** References of documents used for the compilation are listed. Some of the data were obtained directly from the States and do not appear in the published data. The names of individuals who supplied the data are listed.
10. **DRAWINGS.** This section contains miscellaneous details to clarify the written information.
11. **HPC SPECIFICATIONS.** When available, the special provisions for HPC in the bridge are included.

## 5b. Summary Tables

Information in the summary tables is not as detailed as the information in the individual bridge compilations. The ten summary tables provide a means to compare data from different states and different bridges. The tables are arranged as follows:

Tables 1a and 1b provide a description of the major features of the girders and decks, respectively.

Table 2a provides information about structural design considerations.

Tables 3a and 3b list the specified properties for the prestressed concrete girders and cast-in-place concrete decks, respectively.

Tables 4a and 4b list the concrete mix proportions for the prestressed concrete girders and cast-in-place concrete decks, respectively.

Tables 5a and 5b contain a summary of the measured structural concrete properties for the prestressed concrete girders and cast-in-place concrete decks, respectively.

Table 5c contains a summary of the measured durability properties for both the prestressed concrete girders and cast-in-place concrete decks.

For comparison purposes, data originally supplied in SI units have been converted to English units for use in the tables. The user should go to the individual bridge compilations for the SI values.

## 6. Navigation

### 6a. Menus

The HPC CD-ROM menu system works like many other menu-based applications you may be familiar with. The opening screen displays the main menu selections in the center of the screen. Thereafter, the menu selections are arranged across the top of the screen also referred to as the navigation bar. Clicking on the menu selections from either the opening screen or the navigation bar gives the same results. Additional navigation and display options are also presented as buttons on the bottom of the screens.

To return to the opening screen or main menu from anywhere in the presentation, click on the FHWA logo in the top left corner.

The main menu options are:

**Overview**

**Bridges**

**Summary Tables**

**Search**

**CD Map**

**Help**

**6b. Overview** presents the background of the FHWA national program to implement the use of high performance concrete in bridges and a description of what's included on the HPC CD-ROM.

**6c. Bridges** presents either a **Map View** or **Text List** of the thirteen bridges whose data is contained on this version of the HPC CD-ROM. The individual compilations may be accessed by clicking on **Bridges** on the opening screen and then moving the mouse over the light blue states. A drop-down menu will appear. Click on an individual bridge. Alternatively, click on the **Text List** button and select an individual bridge from the HPC Bridge List screen. When viewing Individual Bridge Compilation data use the vertical scroll bar - when present - to browse the full range of text on the current page. Click on the **back** and **next** buttons to navigate to the previous or next page or section of data.

**6d. Summary Tables** may be accessed by clicking on **Summary Tables** on the opening screen or in the top navigation bar throughout the presentation. To view the full selection of Summary Tables and navigate between them, click **Summary Tables**. From the Summary Tables screen, click the **Index** button on the bottom of the screen and select a table from the pop-up menu. You may also use the **back** and **next** buttons to move between tables. When viewing Summary Table data use the horizontal scroll bar – where present - to browse the full range of text in each table.

#### **6e. Search**

Information on a specific topic can be obtained by using the search option. Clicking on **Search** from either the main screen or the navigation bar will display a Find dialog box. The Find dialog box can be made larger or smaller and dragged around the screen using traditional Windows methodology. By placing the cursor on the corner of the dialog box a double-sided arrow appears. With the double-sided arrow visible keep the left mouse button depressed and move the arrow in or out to shrink or enlarge the size of the dialog box. The dialog box can be dragged around the screen by placing the cursor on the top blue bar, clicking the left mouse button and dragging. In this way the Find dialog box can be moved as needed to view the text displayed as search results.

Enter any word you wish to locate within the bridge data and click **Find**. A percentage beside the Word/Phrase box displays how much of the search is complete. A list of pages that contain that word will be displayed in the Page box. Using the mouse, select a page from the list and click **Go to Page**. The page containing the search term will be

displayed and the search term will be highlighted in neon green. If the search term is not visible it may be necessary to scroll vertically or horizontally to view all the text. **Cancel** will stop a search and **Pause** temporarily halts the search and changes the button's title to **Resume**. Clicking **Resume** restarts the search where it left off. However, most searches of the HPC CD-ROM data complete so quickly there is little need or opportunity to pause a search.

If a verb is entered as a search item, the search engine will automatically search for both the verb and other forms of the verb. For example, if "find" is entered, the search engine will also locate all instances of "found," though alternate forms of the verb will not be highlighted in green.

### **Boolean Search**

Sophisticated searches based on Boolean logic (AND, OR, AND NOT) can be set up.

To search for deck AND girder AND span (All three words in one page)

type

deck & girder & span

into the Word / Phrase box.

To search for deck OR girder OR span (Each word individually)

type

deck | girder | span

into the Word / Phrase box.

To search for deck AND girder AND NOT span (Pages with the words deck and girder but not span)

type

deck & girder ! span

into the Word / Phrase box.

### **6f. CD Map**

The CD Map allows both an overview and navigation to all the content on the HPC CD-ROM. You may click on any Section to see sub-sections and navigate directly to that section by clicking on the text.

## 6g. Help

The Help section provides assistance in using the HPC CD-ROM.

## 7. Printing

Although a Print option is not included in the HPC CD-ROM menu features, the compiled information from each bridge is available as a Word file from which hard copy can be printed. Click on **Open Word Document**. For some of the data shown as graphs, the data are available in Excel files. Click on **Open Excel file to access data**. For execution of these options, it is necessary to have Word and/or Excel 97 or newer available on the computer being used to view the CD. Otherwise, all other necessary software is contained on the CD.

## 8. Frequently Asked Questions

**Question 1:** When I put the HPC CD in the CD-ROM drive nothing happens.

**Answer:** The HPC CD-ROM was designed to launch automatically and prompt you to either run the presentation from the CD or install the presentation to your hard drive. If the launch does not occur after thirty seconds, auto insert notification may not be enabled on your personal computer. Windows 2000 enables auto insert notification by default and requires it be turned off on a CD by CD basis. Machines running Win95/98 may enable auto-insert notification as follows:

1. From the Windows desktop, right click, **My Computer** and select **Properties**.
2. Select the **Device Manager** tab
3. Expand the **CD-ROM** category by clicking on the + symbol to the left of the category
4. Single click (highlight) your CD-ROM drive
5. Press the **Properties** button at the bottom of the window
6. Select the **Settings** tab
7. Make sure the **Auto insert notification** box is checked

**Question 2:** When I tried to install HPC CD a message displayed, "Insufficient color depth. For optimal viewing, it is recommended that you set your monitor to 24 bit color or higher."

**Answer:** The HPC CD contains photographs and line art that will display poorly at low color depths. The display color depth may be changed as follows:

1. Click **Start**, go to **Settings** and select **Control Panel**
2. Double click **Display**
3. Click on the **Settings** tab
4. Under Colors, select **True Color (24 bit)** or higher
5. Click **Apply** and choose to apply the new color settings without restarting (this option only available in Win98/ME/NT/2000. In Win95 you may have to restart to change color depth.)

Note that not all video cards are capable of displaying more than 256 colors (8 bit) at all resolutions. Please refer to your video display adapter documentation for the capabilities of your specific video card.

**Question 3:** The photographs and/or line art display poorly.

**Answer:** If your video card supports higher color depth than you are currently running, try increasing the color depth as explained in Question 2.

Note that not all video cards are capable of displaying more than 256 colors (8 bit) at all resolutions. Please refer to your video display adapter documentation for the capabilities of your specific video card.

**Question 4:** The Windows **Start** bar is retained on the screen and the buttons at the bottom cannot be viewed. The tops are just visible.

**Answer:** Adjust the properties on your Start bar as follows:

1. Right click a blank space on the Windows Start bar and select **Properties**.
2. Click the **Taskbar Options** or **General** tab.
3. Check the box beside **Auto Hide**, and uncheck the box beside **Always on top**.
4. Click **Apply**.

**Question 5:** When I start the presentation through Windows Explorer, I have difficulty quitting.

**Answer:** It is likely that you started the presentation through Windows Explorer at the same time that the presentation was starting itself from the CD-ROM. When this occurs, there are two versions of the presentation running, one on top of the other. Quitting the one on top merely reveals the one below, creating the impression that the presentation failed to quit properly.

**Question 6:** The presentation appears too small on my monitor.

**Answer:** This presentation runs at 800x600 regardless of what resolution your monitor is set to. Therefore, if your monitor is set to a resolution higher than 800x600, the presentation will appear smaller than full screen. The higher the resolution, the smaller the presentation will appear. If you wish to lower your resolution, (which will make the presentation appear larger) follow the steps for changing color depth in Question 2 above, but instead of changing color depth select a lower resolution using the "Screen area" or "Resolution" slider.

Note: If your monitor is running a lower resolution than 800x600 (640x480 for example), the presentation will not run at all (see System Requirements).